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ABSTRACT

This investigation attempts to replicate previous studies by Spivak and Shure regarding the relationship between cognitive interpersonal problem-solving capacity and behavioral adjustment in 4-year-old children. Although Spivack and Shure's only measure of behavioral adjustment was teacher ratings (with the teachers aware of the purpose of the rating), this study used two different approaches to obtain measures of behavior: (1) teachers unaware of the purpose of the instrument were asked to rate children's classroom behaviors, and (2) children's behaviors were actually observed and recorded while children were in small-group play situations. Subjects were 107 black preschool children who were individually administered the Preschool Interpersonal Problem-Solving Test devised by Spivack and Shure. Each child's score consisted of the number of different solutions given for each problem. Classroom teachers were asked to complete Spivack and Shure's Preschool Behavior Rating Scale for each child after the children had attended preschool for four weeks. This scale consists of seven items (persistent and nagging, easily upset by peers, physically aggressive, dominant, etc.) which load on three factors: impatience, emotionality and aggression. In addition, a randomly selected group of 56 children were observed in small play groups and rated using the Sharp Behavior Identification Checklist. Each child was observed three times, ten minutes each time, on three different days. Results showed no significant relationship between children's problem-solving ability and behavior. While these findings are contrary to those of Spivak and Shure, they are consistent with research investigating the relationship between thought and behavior in other areas of child development. (Author/SS)

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Interpersonal Problem-Solving Capacity and Behavioral Adjustment in Preschool Children

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Shure and Spivack (1970, 1971, 1973) report that preschool children who are considered more "adjusted" can think through and solve real-life problems more adequately than children considered "poorly adjusted." Further, they report that their intervention program directed toward improving problem-solving skills has been successful in not only improving cognitive skills but also improvement in the cognitive problem-solving has been accompanied by behavioral improvement. These results represent an important new finding. The basic notion that there is a strong relationship between thought and behavior in 4-year-olds, up to this time, has seemed rather doubtful given the findings suggesting the lack of such a relationship by many researchers in other areas of child development.

While Shure and Spivack's results have been impressive, a critical examination of their methodology and analyses reveal several sources of contamination and confounding. Most important, Shure and Spivack's only measure of behavioral adjustment has been teachers' ratings, and in some of their studies it is reported that these same teachers are used as trainers in the intervention program. It is possible that teachers' awareness of the intent of the behavioral measurement and the program content may have contaminated their results.

The present investigation was conducted to explore the relationship between cognitive interpersonal problem-solving capacity and behavioral adjustment in 4-year-old children using two distinct measures of behavior: (1) teachers who were left unaware of the purpose of the instrument were asked to rate children's classroom behaviors, and (2) children's

behaviors were actually observed and recorded while in small-group play situations.

The investigator was interested in pursuing this research not purely as a pedantic desire for clean methodology. Rather, clean methodology was viewed as a necessary prerequisite to verify the existence of a relationship between thought and behavior in young children, which in light of previous data, would be an important new finding. A finding which warrants replication.

Sample

Subjects were 107 black preschool children, 49 girls and 58 boys, who attended one of three Title I preschools in the Detroit public school system (mean age, 4.5 years).

Procedure

Three types of information were obtained for each child. First, each child was individually administered the Preschool Interpersonal Problem-Solving (PIPS) Test. This test, devised by Spivack and Shure, measures the child's ability to conceptualize alternative solutions to two types of problems: (1) one child wants to play with the toy with which another child is playing and (2) the child is asked how to avert the mother's anger after the child has damaged her property. The test is made up of seven peer and five mother problems. An example, "Here is Charles. He has been playing with this shovel for a long time. James would like a chance to play with that shovel. What can James do (or say) to get a chance to play with the shovel?" The child's score consists of the number of different solutions given. Enumerations, repetitions and elaborations of previously given solutions are not counted as additional alternatives.

Second, classroom teachers were asked to complete Spivack and Shure's Preschool Behavior Rating Scale (HPBS) for each child after the children had attended preschool for four weeks. This scale consists of seven items (e.g., persistent and nagging, easily upset by peers, physically aggressive, dominant): each item is rated on a scale of 1 through 9. These seven items load on three factors: impatience, emotionality and aggression. Based on the child's score on these factors, each child was classified according to Spivack and Shure's manual into one of three behavioral groups: adjusted, inhibited or impulsive.

Third, a randomly selected group of fifty-six children, 28 boys and 28 girls, were observed in small play groups, each group consisting of two boys and two girls. The Sharp Behavior Identification Checklist, consisting of twenty-one behaviors, was devised specifically for this aspect of the study. Included on the checklist are behaviors which are consistent with items on Shure and Spivack's behavior rating scale and typical alternatives given by children on the PIPS Test. Each child was observed three times, ten minutes each time, on three different days. Using a combination of time- and event-sampling, all behaviors observed in each ten-second interval were recorded. A total of 120 intervals of behavioral observation were collected for each child.

Reliability was assessed by simultaneous 40-interval observations on four children by each pair of independent observers. There were a total of six pairs of observers; agreement ranged from 79% to 91%. Overall inter-observer agreement across behaviors was established at 86.7%.

Results

An unequal cells one-way analysis of variance was performed to test whether children in the three behavioral adjustment groups (inhibited, adjusted, impulsive) differed on their PIPS score. While Shure and Spivack report the children judged to be "adjusted" score significantly higher than those classified as "impulsive" or "inhibited," the present results show no significant difference between the three groups (F (2,106) = 2.17).

To examine the relationship between observed behavior and cognitive problem-solving scores (PIPS Test scores), the degree to which the children were observed engaging in "negative" behaviors (e.g., grabbing, hitting, disturbing others) was calculated. Shure and Spivack would predict a strong negative relationship, that is, low problem-solving capacity goes along with higher amounts of negative behavior. Pierson product moment correlations calculated revealed a low but positive correlation between PIPS scores and negative behavior for both boys and girls (r = .119 and r = .312, respectively).

Conclusions

The present investigation consistently indicates there is no significant relationship between interpersonal problem-solving capacity, as measured by the PIPS Test, and behavioral adjustment in preschool children, whether one measures the children's behavior by teacher ratings or by actually observing their play. These findings are contrary to those of Shure and Spivack, and hence do not support their position that there is an intimate relationship, at the preschool age, between "healthy functioning" and the cognitive ability to think through and solve interpersonal problems.

The present findings, however, are consistent with those of other researchers investigating the relationship between thought and behavior. Kendler and Kendler (1962) suggest that the verbal response represents one chain of habits and behavior another. For very young children the two chains are parallel and therefore do not interact. Luria (1961) made a similar observation in his research. In the early stages of development speech serves as merely a form of communication; it is not until subsequent development occurs that speech organizes and regulates behavior. Kohlberg (1969) states that cognitive maturity does not predict performance. While a child may well have learned to verbalize ways in which he or she can solve a problem, it is another issue as to whether that same child acts in congruence with what is verbalized.

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